

**South Dakota Science and Technology Authority Board of Directors**  
**Meeting Minutes**  
**Thursday, December 14, 2017**  
**Lead, South Dakota**

The Board of Directors of the South Dakota Science and Technology Authority (SDSTA) convened at 9:00AM Mountain Time (MT) on Thursday, December 14, 2017 in the Education and Outreach (E&O) Building Conference Room at the South Dakota Science and Technology Authority, 630 East Summit Street, Lead, South Dakota.

**MEMBERS OF THE BOARD IN ATTENDANCE**

Dr. Ani Aprahamian (by phone)  
Mr. Paul Christen (in person)  
Mr. Dana Dykhous (by phone)  
Secretary/Treasurer Patricia Lebrun (in person)  
Chairperson Casey Peterson (in person)  
Dr. Jan Puszyński (in person)  
Vice Chairperson Ron Wheeler (in person)  
Dr. Robert Wilson (by phone)

**SDSTA STAFF**

Mr. Tim Engel, Legal Counsel  
Ms. Nancy Geary, Chief Financial Officer  
Mr. Mike Headley, Executive Director  
Ms. Mandy Knight, Administrative Services Manager  
Mr. KC Russell, Cultural Diversity Coordinator  
Mr. Allan Stratman, Engineering Director  
Ms. Constance Walter, Communications Director

**ALSO PRESENT DURING ALL OR PART OF THE MEETING**

Dr. June Apaza, Education and Outreach Director  
Dr. Becky Bundy, Education and Outreach Science Education Specialist (BHSU)  
Ms. Julie Dahl, Education and Outreach Science Education Specialist (BHSU)  
Ms. Donna Job, Sanford Lab Homestake Visitor Center Executive Director  
Dr. Peggy Norris, Education and Outreach Deputy Director (BHSU)  
Ms. Jaci Pearson, Journalist for Black Hills Pioneer  
Mr. Torin Peterson, son of Chairperson Casey Peterson  
Dr. Ben Sayler, Sanford Science Education Center Director  
Mr. Jim Sheridan, guest of Board Member Mr. Christen  
Ms. Kari Webb, Education and Outreach Science Education Specialist (BHSU)  
Mr. Joshua Willhite, LBNF Far Site Conventional Facilities Project Manager (Fermilab)

**ITEM 1. CALL TO ORDER**

Chairperson Peterson called the meeting to order at 9:00 AM (MT). Roll call was held. All attendees were present in person except Dr. Ani Aprahamian, Mr. Dana Dykhous and Dr. Robert Wilson, who joined by telephone.

Chairperson Peterson then asked audience members to introduce themselves.

*Ms. Pat Lebrun attending the meeting in person at 9:01am.*

Mr. Headley introduced Ms. Donna Job to the board and congratulated her as the new the Sanford Lab Homestake Visitor Center Executive Director.

## **ITEM 2. APPROVE AGENDA**

Chairperson Peterson asked if there were any modifications to the agenda and hearing none asked for a motion to approve the agenda.

*Motion by Mr. Christen and second by Dr. Wilson to approve the agenda as presented. Motion passed unanimously.*

## **ITEM 3. CONFLICT OF INTEREST DISCLOSURE**

SDSTA Legal Counsel Mr. Tim Engel reminded the board members that if they have anything that might be a conflict of interest now would be the time to mention it.

Mr. Engel then discussed Item No. 5 on the agenda.

## **ITEM 5. DISCLOSURES AND WAIVER UNDER SDCL CH. 3-23**

He said an email was sent earlier in the month to poll the board about formal disclosures required by the statutes and that he did not hear anything from any board member requiring a formal disclosure. He then asked if the board had anything to disclose. Hearing none, he said that the Board of Internal Control has been working on a Code of Conduct for Boards and Commissions and is a work on progress. He said it will apply to this board and he is monitoring it.

*Mr. Dana Dykhous joined the meeting by phone at 9:05am.*

Mr. Engel said to Mr. Dykhous they were discussing item No. 5 and asked if he had anything to disclose. Mr. Dykhous replied First Premiere Bank has a contract for banking services with the state of South Dakota but he has no financial interest in First Premier Bank. Mr. Engel said no further formal disclosure is required.

## **ITEM 6. REPORT FROM AUDIT COMMITTEE**

SDSTA Board member and Audit Committee Chair Ms. Patricia Lebrun reported that the Audit Committee held a teleconference on October 25 to discuss the Audit Report for Fiscal Year Ended June 30, 2017. She said the audit was clean thanks to the SDSTA Finance staff. She said Mr. Al Schaefer of the South Dakota Department of Legislative Audit was complimentary of the SDSTA and the Finance Office for their proficiency. Ms. Lebrun said there were no findings. There was a recommendation that an SDSTA employee visit unannounced and physically exam the xenon stored at SLAC National Accelerator Laboratory on an annual basis. Mr. Headley confirmed he physically examined the stored xenon at SLAC after attending an LZ Director's Review in California this last month. Ms. Lebrun then said an action item to approve the audit report will be necessary at the March 2018 board meeting.

*Motion by Mr. Wheeler and second by Mr. Dykhous to accept the Audit Committee Report and to request Audit Report approval at the next regularly scheduled board meeting per statute. The motion passed unanimously.*

Chairperson Peterson then reverted to Item No. 4 on the agenda.

## **ITEM 4. APPROVE MINUTES**

Chairperson Peterson asked for any corrections or approval to the Minutes of the September 21, 2017 meeting. There were none.

*Motion by Mr. Wheeler and second by Mr. Dykhous to approve the Minutes of the September 21, 2017 meeting as presented. Motion passed unanimously.*

## **ITEM 7. FINANCIAL REPORT**

Chairperson Peterson thanked SDSTA Chief Financial Officer Ms. Geary and her staff for doing a great job on the clean audit and also thanked the Audit Committee for their work. Ms. Geary then presented the November Financial report and said the SDSTA is going through several audits and reviews. Also, the transition from Berkeley Risk to Dakota Underwriters through Williams Insurance Co. for Worker's Compensation has been finalized with a reduction in the rates. Ms. Geary said a Fermilab Audit is being conducted on FY2017 invoices for the operations contract, and Fermilab is reviewing the indirect cost rate cost and employee benefit rate calculation from the end of FY2017. She asked if there were any questions. Ms. Lebrun said she reviewed a copy of the Fermilab audit letter and it stated Fermilab was also looking at the financial controls. Ms. Geary replied yes and said this is the second year of audit on the financial controls as well as the accounting system; this will likely be conducted annually.

*Motion by Mr. Christen and second by Ms. Lebrun to accept the financial report as presented. The motion passed unanimously.*

## **ITEM 8. REPORT FROM THE EXECUTIVE DIRECTOR**

### **ITEM 8A. SDSTA Update**

Mr. Headley began with a slide presentation and discussed safety performance and said there have been five recordable injuries for SDSTA employees for 2017. He said it is certainly higher than the SDSTA would like it to be but the last 2-3 months have been quite good. He said the Environment, Safety and Health (ESH) Director position has been filled by Mr. Larry Jaudon, who will start next week. Mr. Jaudon has over 30 years of experience in underground safety with mining, construction and operations. Mr. Jaudon is an OSHA and MSHA certified instructor and a Certified Mine Safety Professional. Mr. Headley said several members on the ESH Oversight Committee have made offers for Mr. Jaudon to visit some of the national laboratories to get a feel for national lab safety operations.

He said the SDSTA is spending a great deal of time reorganizing and updating the ESH Manual as it was created in the 2009-2010 timeframe and there are areas that need to be updated. The ESH Fermilab team has been helping with the chapters dealing with work planning and controls, emergency management / response, explosives management, and incident reporting and investigation.

Five staff attended Human Performance Improvement (HPI) training in Salt Lake City and the SDSTA is implementing the principles learned.

Mr. Headley said the SDSTA has been working with Alaris, a company that provides occupational nurse and medical support. He said a full-time occupational nurse has been secured and will work five days a week, day shift starting in March. Mr. Headley said he has talked to several groups in regard to implementing injury reduction and management programs and this has been a key element in their programs. The nurse will also help develop an SDSTA Wellness Program. Chairperson Peterson asked if the person will be a contractor and Mr. Headley replied yes.

Mr. Headley provided status updates on Federal funding for FY2017 and FY2018. He said Mr. Wheeler and Fermilab staff visited with individuals in Washington, D.C. to advocate increasing FY2018 funding for the Long-Baseline Neutrino Facility/Deep Underground Neutrino Facility (LBNF/DUNE) to \$95 Million. Mr. Wheeler said there is strong support.

In regard to LBNF Construction, he said Mr. Willhite will cover the topic in more detail during his presentation but said the Ross Shaft refurbishment project reached the 4850L on October 12 and an appreciation luncheon is being planned for December 21. Refurbishment is six sets below the 4850L.

He said the Compact Accelerator for Performing Astrophysical Research (CASPAR) accelerator commissioning continues since the July 2017 ribbon cutting, and they are planning the first beam on target in January.

Mr. Headley said the LUX-ZEPLIN (LZ) experiment construction is underway at various facilities off-site and the cryostat will arrive onsite for Surface Lab assembly starting in January. Also, LZ modifications to the 4850L Davis Campus will commence in January. He said the xenon procurement remains on track and the SDSTA has received 900,000 of 1.5M liters purchased.

He said the Majorana Demonstrator (MJD) continue to operate and just released a paper on their background results. The collaboration has formed with MJD and GERmanium Detector Array (GERDA)—called Large Enriched Germanium Experiment for Neutrinoless  $\beta\beta$  Decay (LEGEND) towards a tonne-scale experiment forward.

In regard to the Ellison Hill property purchase, Mr. Headley said the asbestos has been mitigated. Plans are in the works to transition cored archive from the Machine Shop to the Drill/Bit Shop and Old High Compressor Building in the spring.

Mr. Headley then showed several photos of his visit to SLAC where he physically examined the xenon storage. He said several cylinders are being stored in sea containers in addition to basement storage in locked cages. Each cylinder contains 10,000 liters of xenon and weighs approximately 220lbs when filled.

Mr. Engel pointed out from the photos that the xenon is locked up and asked if there are any other security measures. Mr. Headley confirmed and said SLAC's site is controlled access and individuals are required to pass a guard gate. He said in regard to the SLAC facility system, each cylinder is numbered and registered as a building so they are tracked from an inventory perspective. Chairperson Peterson asked if the xenon is insured and Mr. Headley replied yes. Mr. Headley answered several other xenon storage questions and then moved on to cultural activities.

Mr. Headley said Cultural Advisory Coordinator Mr. KC Russell participated in and presented to participants at the 2017 SD Indian Education Summit in Pierre. He said Mr. Rylan Sprague has resigned from the Cultural Advisory Committee (CAC) as he has accepted a new job in Washington state. The SDSTA has recruited a prospective CAC member who is a Cheyenne River Sioux Tribal member and a civil engineering graduate of the SD School of Mines and Technology. Also, Mr. Russell assisted the STARBASE Program set up academies at the Pierre Learning Center which provides education for Tribal Member students. Several SDSTA staff attended a special honoring and naming of the Jace DeCory Center for American Indian Studies at BHSU in October. Ms. DeCory recently retired as a BHSU professor and was a great partner to work with at Sanford Lab. Also, staff attended National Historic Preservation Act, Section 106 training in Denver as required by the Programmatic Agreement.

Mr. Headley then introduced Education & Outreach (E&O) Director Dr. June Apaza to give a brief update on E&O activities. Dr. Apaza began with the numbers relating to classroom presentations, students at the presentations, units completed, students that completed the units, units currently being taught and numbers of teachers in the online class (since the beginning of the school year, September 1, 2017).

Dr. Apaza discussed the online professional development and said teachers earn graduate credits in education, not re-certification. She also said the E&O team covered an additional three counties in the state, but with winter approaching, it will be more difficult to travel to many of the schools. In regard to current Research & Development efforts, curriculum units that are in the works at the high school, middle school and elementary schools include, respectively: "It's Electric", "Argon-Transfer Challenge" and "As a Matter of Fact!"

Dr. Apaza displayed the online professional development website and said Science Education Specialist Ms. Kari Webb took the lead on this.

Ms. Lebrun asked how teachers are made aware of the program, and Dr. Apaza said the E&O team sent information to the teachers that participated in last summer's workshop and then to several teachers and school districts they have worked with in the past.

Mr. Headley returned to a xenon storage/inventory question and confirmed there are 76 cylinders in the sea container and 30 in the basement of the lab for a total of 106 cylinders.

#### **ITEM 8C. Long Baseline Neutrino Facility Update**

Mr. Headley introduced LBNF FSCF Project Manager Mr. Joshua Willhite who began his presentation with the number of collaborators (1032), institutions (176) and nations (31) in the DUNE (Deep Underground Neutrino Experiment) Collaboration. He said on September 20, the United Kingdom announced an \$88M (£65M) commitment towards DUNE, LBNF and the Proton Improvement Program (PIP)-II and is the first major commitment from a country. (PIP-II is at Fermilab and is separate project from LBNF/DUNE but has a strong contribution to the success of LBNF/DUNE by providing a higher energy neutrino beam). He also displayed photos of the ProtoDUNE progress at CERN and the single-phase detectors.

Mr. Willhite recapped the Groundbreaking held on July 12 and said there is strong support from all entities across the world.

He reminded the board that Kiewit/Alberici Joint Venture (KAJV) was selected as the General Contractor/General Manager (CM/GC) for the LBNF project. KAJV's initial scope is bidding pre-excavation work and supporting final design. Mr. Willhite said the most significant near-term work is to establish a system for handling excavated rock and plan a pipe conveyor system.

He said LBNF is working with a pipe conveyor design and manufacturing team to finalize the design of the pipe conveyor and begin construction. He discussed all the teams involved with the pipe conveyor, the conveyor route, geotechnical analysis, easements, conveyor general appearance, conveyor enclosures, and pipe conveyor discharge. He said KAJV held an outreach meeting in the area and approximately 150 local and regional individuals attended; a very strong turnout.

Mr. Willhite discussed other upcoming work by KAJV and other near term (next couple of years) projects not in the KAJV scope. He said additional office space is being planned for the LBNF team in the Ross Dry. as the Administration Building offices are completely full and there is no additional space available. Fermilab recently hired a Logistics Manager, Elizabeth Hilgart, to develop plans to get all the parts and pieces not managed by the KAJV to Lead. Fermilab also hired a new Construction Coordinator and that person will start on January 8; two additional Construction Coordinators are planned in the future. The Department of Energy is currently seeking a Procurement Administrator representative to spend 50% of their time in Lead (but based at Fermilab).

#### **ITEM 8B. Declarations of Surplus Property**

Mr. Engel said the declarations of surplus property in the board packet are within the Executive Director's authority to approve, but given the dollar amount of the timber declaration, he suggested the chairperson request a motion to approve it. Chairperson Peterson then requested a motion.

*Motion by Mr. Christen and second by Mr. Wheeler to approve the timber declaration of surplus as presented. Motion passed unanimously.*



Chairperson Peterson asked Mr. Headley and Mr. Willhite to further address the Ross Dry Space discussed in 8C.

Mr. Willhite discussed the Ross Dry Space depicted in a slide. He said the LBNF project would like to include the blue-colored areas (two office spaces, handicapped accessible ramp and bathrooms and HVAC equipment spaces) in the lease agreement. Mr. Headley said they are expecting to receive a modification to the lease agreement to add these spaces.

*Motion by Mr. Wheeler and second by Ms. Lebrun to authorize the chairperson to sign an amended or modified lease to include the additional space in the Ross Dry as presented. The motion passed unanimously.*

*Motion by Ms. Lebrun and second by Mr. Wheeler to accept the executive director's report as presented. Motion passed unanimously.*

## **ITEM 9. LOBBYIST REGISTRATION**

Mr. Engel said the SDSTA does not have legislative agenda items this upcoming session, but he said it is important to have a presence during the legislative session. Invariably, if an item arises that may have an impact on the SDSTA, it is good to have a representative there. Mr. Engel recommended the board approve Mr. Headley, Mr. Wheeler and Mr. Engel as lobbyists for the 2018 Legislative Session and said a formal authorization was needed for Administrative Services Manager Ms. Mandy Knight to register them.

*Motion by Ms. Lebrun and second by Mr. Wheeler to designate Mr. Mike Headley, Mr. Ron Wheeler and Mr. Tim Engel as lobbyists for the SDSTA. By roll call vote, the motion passed unanimously.*

## **ITEM 10. SDSTA POLICIES AND PROCEDURES**

Mr. Headley briefly discussed the updated Whistleblower Policy and said there was a provision inserted back when Mr. Headley was supporting the LBNF project more directly and a conflict of interest plan was put in place. He said it no longer applies and the language has been removed. (The policy was reviewed by Mr. Engel).

*Motion by Mr. Wheeler and second by Mr. Dykhous to approve the updated Whistleblower Policy, as presented. By roll call vote, the motion passed unanimously.*

## **ITEM 11. EXECUTIVE SESSION**

*Motion by Dr. Wilson and second by Mr. Wheeler to enter into executive session to discuss personnel matters and to consult with legal counsel concerning contractual matters. Motion passed unanimously.*

*The board recessed at 10:26 AM for a break and Executive Session and then reconvened at 11:36 AM.*

*Dr. Aprahamian and Dr. Wilson rejoined the meeting by phone.*

*Mr. Dykhous was unable to rejoin by phone.*

## **ITEM 12. REPORT FROM EXECUTIVE SESSION**

Chairperson Peterson reported that the board consulted with legal counsel concerning contractual and legal matters and personnel matters. No action was taken.

*Motion by Ms. Lebrun and second by Mr. Christen to approve the executive session report. Motion passed unanimously.*

### **ITEM 13. CONFIRM 2018 BOARD SCHEDULE**

Chairperson Peterson asked if board members had a chance to review the 2018 meeting schedule. Mr. Wheeler suggested the December 22 meeting be rescheduled to December 13 since the date is close to the holidays and schedule conflicts may arise. Mr. Headley noted that the financials may not be ready by then but the board said that it is understandable and concurred to move the meeting to December 13 at 9:00 AM (MT).

### **ITEM 14. BOARD COMMENTS**

Dr. Ani Aprahamian said she is glad she could attend the board meeting by phone and it is good to hear about the progress at Sanford Lab.

Dr. Wilson said everything is going well and he is impressed with the Education and Outreach. He said the core team at Sanford Lab is doing a great job and thanked everyone.

Dr. Puszynski said the new president at SDSM&T will start on January 8 and he will step down at that time. He said their first PhD student in physics will graduate this weekend and will officially complete his studies in the summer. Dr. Puszynski said it is important to increase the number of students at SDSM&T and the SD Board of Regents has approved a special non-resident tuition program for Nebraska students. He also said Colorado/Montana students who earn a 3.5 grade point average with a minimum of a 27 ACT score would be eligible.

Mr. Wheeler reiterated that Mr. Headley and the core staff are doing wonderful. He also wished everybody Happy Holidays and to stay safe.

Mr. Christen said the SDSTA staff is doing a terrific job. He said one of his main concerns is to keep the projects on time. He said he was happy the position is filled for the Sanford Lab Homestake Visitor Center executive director and hopes it works out well. He said he is very happy a new safety director has been hired. He wished everyone a Merry Christmas.

Ms. Lebus said this was another great meeting and thanked the staff that helps the meetings go so smoothly and appreciates the efficiency of having board materials ready. She said she neglected to mention during Item No. 6 Report on Audit Committee that the state auditor had asked if the SDSTA had ever had an internal control audit. She said there has never been this type of audit and recommended including an item to discuss an internal control on the March 22, 2018 agenda. Chairperson Peterson concurred. She thanked everyone and wished everyone a nice Holiday Season.

Mr. Mike Headley thanked the board for the partnership and support this last year. He said it is great to know the board supports the SDSTA. He thanked Ms. Knight for organizing and supporting the meeting as well recognizing the great work of the SDSTA team. He said he is looking forward to Mr. Jaudon starting and realizes the SDSTA safety program needs to be strengthened. He wished everyone a Happy Holidays and a great Christmas.

Mr. Tim Engel thanked the board for the opportunity. He said he really enjoys the work and as well as working with the SDSTA team. He said his work-related requests to SDSTA staff are timely and he never has to worry about that which is very helpful to get his job done. He wished everyone a great holiday.

Mr. Headley commented that Science Director Dr. Jaret Heise, Communications Director Constance Walter and himself will be in Pierre on Monday to talk to the Rotary Club at noon and to talk at the Discovery Center at 6pm if individuals are in the area and would like to stop by. He said the Sanford Lab briefing to the legislature is scheduled for January 11. Also, Mr. Engel said he and Mr. Headley

spent several hours the day before Thanksgiving with the Governor's staff to discuss the possibility of a cooperative agreement.

Chairperson Peterson said he is amazed that in 2018, the SDSTA will be celebrating its 15<sup>th</sup> Anniversary. He thanked Mr. Willhite, Mr. Headley, Ms. Knight and staff and said he appreciates everyone stepping up and rising to the challenges. He said he appreciates the board stepping up as well and Mr. Wheeler with funding as it is a big deal. Fermilab is a big part of SDSTA's life but they are also dependent on us. Chairperson Peterson thanked everyone for all they have done and wished everyone a Merry Christmas.

#### **ITEM 15. ADJOURN**

Chairperson Peterson asked if anyone had any other questions or comments, then called for a motion to adjourn.

*Motion by Mr. Wheeler and second by Mr. Christen to adjourn. Motion passed unanimously.*

Chairperson Peterson reminded those present to stay for lunch.

**Meeting adjourned at 11:49AM.**